

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number
WO 2004/045529 A3

- (51) International Patent Classification⁷: C07H 21/04, A61K 39/00, 39/12, C12P 21/00
- (21) International Application Number: PCT/US2003/036623
- (22) International Filing Date: 13 November 2003 (13.11.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/426,592 15 November 2002 (15.11.2002) US
- (63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application: US 60/426,592 (CIP) Filed on 15 November 2002 (15.11.2002)
- (71) Applicant (for all designated States except US): ACAM-BIS, INC. [US/US]; 38 Sidney Street, Cambridge, MA 02139 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): ARROYO, Juan [US/US]; 1014 Grand Champion Drive, Rockville, MD 20850 (US).
- (74) Agent: MICHAUD, Susan, M., Ph., D.; Clark & Elbing LLP, 101 Federal Street, Boston, MA 02110 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
- with international search report
 - before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) Date of publication of the international search report: 26 August 2004
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/045529 A3

(54) Title: WEST NILE VIRUS VACCINE

(57) Abstract: The invention provides chimeric flavivirus vaccines against West Nile virus and methods of using these vaccines to prevent or treat West Nile virus infection.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/36623

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C07H 21/04; A61K 39/00, 39/12; C12P 21/00

US CL : 536/23.4, 23.72; 424/218.1, 192.1; 435/69.7

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 536/23.4, 23.72; 424/218.1, 192.1; 435/69.7

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MEDLINE, WEST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	ARROYO, J, Yellow Fever Vector Live-Virus Vaccines: West Nile Virus Vaccine Development. TRENDS in Molecular Medicine, August 2001, Vol. 7, No. 8, pages 350-354, see entire document.	1-14
Y	US 6,136,561 A (IVY et al) 24 October 2000 (24.10.2000), see entire document.	1-14
Y	US 6,416,763 B1 (McDONELL et al) 09 July 2002 (09.07.2002), see entire document.	1-14

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

Special categories of cited documents:	
* "A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

28 June 2004 (28.06.2004)

Date of mailing of the international search report

15 JUL 2004

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Authorized officer

Laurie A. Scheiner

Telephone No. 703-308-0196